

3.2. Mixtures

Not applicable.

4. FIRST AID MEASURES

4.1. Description of first aid measures

Burns caused by molten material require hospital treatment.

If inhaled: not relevant.

On skin contact: burns caused by molten material require hospital treatment.

On contact with eyes: if irritation develops, seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms: no significant reaction of the human body to the product known.

Hazards: no hazard is expected under intended use and appropriate handling.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment: treat symptomatically.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: water spray, foam, dry powder, carbon dioxide.

5.2. Special hazards arising from the substance or mixture

At temperature of > 300°C can be emitted: carbon monoxide, hydrogen cyanide.

Under special fire conditions traces of other toxic substances are possible. Formation of further decomposition and oxidation products depends upon the fire conditions.

5.3. Advice for firefighters

Further information: dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. ACCIDENTAL RELEASE MEASURES

High risk of slipping due to leakage/spillage of product.

6.1. Personal precautions, protective equipment and emergency procedures

No special precautions necessary.

6.2. Environmental precautions

No special precautions necessary.



6.3. Methods and material for containment and cleaning up

For small amounts: Pick up with suitable appliance and dispose of.
 For large amounts: Pick up with suitable appliance and dispose of.

6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Protection against fire and explosion: take precautionary measures against static discharges.

7.2. Conditions for safe storage, including any incompatibilities

Storage stability: protect against moisture.

7.3. Specific end use(s)

For the relevant identified use(s) listed in section 1 the advice mentioned in this section 7 is to be observed.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1. Control parameters

Components with occupational exposure limits
 None.

8.2. Exposure controls

Personal protective equipment

Eye protection: safety glasses with side-shields (frame goggles) (e.g. EN 166)

General safety and hygiene measures

No special precautions necessary. Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls

For information regarding environmental exposure controls, see section 6.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Form	fiber (filament).
Colour	white, translucent.
Odour	odourless.
Odour threshold	not applicable.
pH value	not soluble.
Melting temperature	approx.. 191 - 197°C
Onset of boiling	not applicable.
Sublimation point	not applicable information available.
Flashpoint	not applicable, the product is a solid.
Evaporation rate	not applicable, the product is a non-volatile solid.
Flammability	not highly flammable.
Flammability of aerosol products	not applicable, the product does not form flammable aerosols.
Lower explosion limit	for solids not relevant for classification and labelling.
Upper explosion limit	for solids not relevant for classification and labelling
Ignition temperature	> 400°C
Vapour pressure	not applicable.
Density	1,12 – 1,15 g/cm ³ (20°C)
Relative density	no data available.
Relative vapour density (air)	not applicable, the product is a non-volatile solid.
Solubility in water	insoluble.
Partitioning coefficient n-octanol/water (log Kow)	not applicable.
Self-ignition	not self-igniting.
Thermal decomposition	> 300°C
Viscosity, dynamic	not applicable, the product is a solid.
Explosion hazard	not explosive.
Fire promoting properties	not fire-propagating.

9.2. Other information

Self-heating ability	it is not a substance capable of spontaneous heating.
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10. Stability and reactivity

10.1. Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.



10.2. Chemical stability

No hazardous reactions if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions

No hazardous reactions known.

10.4. Conditions to avoid

Temperature: > 300°C

10.5. Incompatible materials

No substance known that should be avoided.

10.6. Hazardous decomposition products

Hazardous decomposition products

Carbon monoxide, hydrogen cyanide, ε-caprolactam.

Thermal decomposition products

ε-caprolactam. The substances/group of substances mentioned may be released during processing.

11. TOXICOLOGICAL INFORMATION

11.1. Acute toxicity

Contact with molten product may cause thermal burns.

11.2. Skin corrosion/irritation

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

11.3. Eye corrosion/irritation

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Experimental/calculated data: may cause mechanical irritation.

11.4. Respiratory sensitization

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

11.5. Skin sensitization

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.



11.6. Mutagenicity

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

11.7. Carcinogenicity

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

11.8. Reproductive toxicity

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

11.9. Specific target organ toxicity (single exposure)

Not applicable

11.10. Specific target organ toxicity (repeated exposure)

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

11.11. Aspiration hazard

Not applicable

11.12. Other relevant toxicity information

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

There is a high probability that the product is not acutely harmful to aquatic organisms. The product has not been tested. The statement has been derived from the structure of the product.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H₂O): experience shows this product to be inert and non-degradable.

12.3. Bioaccumulative potential

The product will not be readily bioavailable due to its consistency and insolubility in water.

12.4. Mobility in soil

Adsorption in soil: study scientifically not justified.

12.5. Results of PBT and vPvB assessment

The product does not fulfill the criteria for PBT (persistent/Bioaccumulative/toxic) and vPvB (very persistent/very Bioaccumulative).

12.6. Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

12.7. Additional information

Add. remarks environment fate & pathway: due to the consistency of the product, dispersion into the environment is impossible. Therefore no negative effects on the environment may be anticipated based on the present state of knowledge.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).

Contaminated packaging: packs must be completely emptied. Completely emptied packagings can be given for recycling.

14. TRANSPORT INFORMATION

14.1. Un number

ADR Not applicable
 IMDG Not applicable
 IATA Not applicable
 ADN Not applicable
 RID Not applicable

14.2. UN proper shipping name

ADR Not applicable
 IMDG Not applicable
 IATA Not applicable
 ADN Not applicable
 RID Not applicable

14.3. Transport hazard class(es)

ADR Not applicable
 IMDG Not applicable
 IATA Not applicable
 ADN Not applicable
 RID Not applicable

14.4. Packing group

ADR Not applicable
 IMDG Not applicable
 IATA Not applicable
 ADN Not applicable
 RID Not applicable

14.5. Environmental hazard

ADR Not applicable
 IMDG Not applicable
 IATA Not applicable
 ADN Not applicable
 RID Not applicable

14.6. Special precautions for user

ADR Not applicable
 IMDG Not applicable
 IATA Not applicable
 ADN Not applicable
 RID Not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Regulation Not evaluated.
 Shipment approved Not evaluated.
 Pollution name Not evaluated.
 Pollution category Not evaluated.
 Ship type Not evaluated.

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulation/legislation specific for the substance or mixture

The data should be considered when making any assessment under the Control of Substance Hazardous to Health Regulations (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it described in this subsection.

15.2. Chemical safety assessment

Chemical safety assessment no required.



16. OTHER INFORMATION

16.1. Indication of changes

No data.

16.2. Abbreviations and acronyms

No data.

16.3. Key literature references and sources for data

The product safety data sheet has been prepared based on the documentation provided by the manufacturer of the granulate from which the filament product was made.

16.4. Relevant R phrases and H statements

No data.

16.5. Training advice

No data.

16.6. Further information

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